

DEVAL L. PATRICK GOVERNOR TIMOTHY P. MURRAY LIEUTENANT GOVERNOR JUDYANN BIGBY, MD SECRETARY

JOHN AUERBACH COMMISSIONER

# The Commonwealth of Massachusetts

Executive Office of Health and Human Services
Department of Public Health
William A. Hinton State Laboratory Institute
305 South Street, Jamaica Plain, MA 02130

06/28/2011

Sarah Stancato
Assistant District Attorney, Suffolk County

Dear ADA Stancato

Enclosed is the information you requested in regards to Commonwealth vs. Included are copies of the following:



- 1. Curriculum Vitae for Annie Dookhan, Daniela Frasca and Kate Corbett
- 2. Drug Analysis Laboratory Receipt.
- 3. Control Cards with analytical results for samples #

4. Analysis sheets with custodial chemist's hand notations and test results.

5. GC/Mass Spectral analytical data for samples #

Dookhan and Daniela Frasca was the custodial chemist and performed the preliminary to

Annie Dookhan and Daniela Frasca was the custodial chemist and performed the preliminary testing and net weight for this sample. Annie Dookhan and Kate Corbett was the confirmatory chemist and analyzed the GC/MS data for this sample.

If you have any questions about these materials, please call me at the number below.

//--

Sincerely

Annie Dookhan

Chemist II

Drug Analysis Lab

Jamaica Plain, MA. 02130

(617) 983-6631

#### Curriculum Vitae

#### Annie Khan (Dookhan)

#### Education:

University of Massachusetts, Boston, Ma, Master of Science in Chemistry. University of Massachusetts, Boston, Ma, Bachelor of Science in Biochemistry.

#### Experience:

2003 - present

Chemist I, II, Massachusetts Department of Public Health, Drug Analysis Laboratory

- \*Completed six-week training course conducted by senior staff within the Department of Public Health, Drug Analysis Laboratory.
- \*Appointed Assistant Analyst by Assistant Commissioner of Public Health, 2004.
- \*Responsible for the identification of illicit drugs to determine violations of harmful and narcotic drug laws.
- \*Trained in the use of complex analytical instrumentation, microscopes and balances for the purpose of drug analysis.
- \*Maintenance and repairs of all analytical instruments.
- \*Responsible for the Quality Control of all analytical instruments, reagents and controls/standards.
- \* Responsible for the Quality Control/Quality Assurance program for the drug lab.
- \*Notary Public.
- \*Qualified as an expert witness in Massachusetts Courts and U.S. District Court

2001 - 2003

OC Analyst I, II, UMMS-Massachusetts Biologic Laboratory, QC Material Control

- \*Completed proficiency training conducted by a member of the staff within the MLB Quality Control and Quality Assurance Department.
- \*Method Development for creating new techniques and enhancing vaccines for the QC Dept. and FDA.
- \*Writing, revising and reviewing Standard Operating Procedures (SOPs).
- \*Trained and supervised new chemists and interns for the department.
- \*Routine QC testing of products for the FDA.
- \*Trained in the use of complex analytical instrumentation, and balances for the purpose of QC analysis for product and validation projects.
- \*Calibration, preventive maintenance, QC and QA of analytical instrumentation.
- \*Complete testing of chemicals for Vendor Validation Project for the FDA.
- \*Compendial testing and interpretation of the USP, ACS, FCC, AOAC, Merck Index, PDR, etc.

#### Additional Training:

Dept. of Justice – Forensics Professionals. (numerous trainings)

GLP/GMP course with Massachusetts Biologic Laboratory.

QC/QA training according to FDA Codes and Regulations.

GC and GC/MS courses with Agilent Technologies and Restek.

HPLC course with Waters Cooperation.

FTIR course with Spectros.

TOC training with MBL and Sievers.

#### Association:

American Chemical Society (ACS)

Northeastern Association of Forensics Science (NEAFS)

# Education

## Boston University School of Medicine, Boston MA

Currently enrolled in the Biomedical Forensic Science MS Program

## Suffolk University, Boston, MA

Graduated in 05/1996 and received a Bachelor of Science in Biochemistry

# **EXPERIENCE**

Massachusetts State Laboratory Institute/DPH, Jamaica Plain, MA 01/2001 - present Drug Laboratory: Chemist II

- Analysis of all substances by chemical screening, microscopy, and instrument confirmation to determine the presence of drugs for law enforcement agencies in the Commonwealth of Massachusetts.
- Appointed assistant analyst on January 29, 2001 by the Assistant Commissioner of DPH
- Completed four weeks of training in drug analysis under the supervision of senior chemists.

# Quest Diagnostics Incorporated, Cambridge, MA

09/1996 - 10/2001

Department of Toxicology: Medical Technologist I

- Handles comprehensive toxic analysis, therapeutic drug monitoring, forensic drug screening, and compound ID's of biohazard samples utilizing standard operating procedures in clinical toxicology.
- Entered data and interpreted results for reporting
- QC/QA of multiple analytical instrumentation as well as maintenance
- Completed 60 days of training under the supervision of doctorate level toxicologists.

# Additional Training

### Northeastern Association of Forensic Scientists

Designer Drugs

Clandestine labs

Agilent Instruments and Software

Digital Photography

#### McCrone Research Institute

Forensic Polarized Microscopy

Polarized Microscopy of Illicit Drugs and Excipients

# Massachusetts State Laboratory Institute

**Expert Witness** 

Raman Spectroscopy

# Associations and Programs

	manage of the second se	
	Northeastern Association of Forensic Scientists (NEAFS)	2001 - present
	The International Association of Forensic Toxicologists (TIAFT)	2003 - present
	The International Association of Therapeutic Drug Monitoring	2003 - present
	And Clinical Toxicology (IATDMCT)	
	Massachusetts State Science Fair Judge	2000 - present
	Middle School State Science Fair Judge	2006 - present
•	Volunteer Science Project Mentor/Tutor	2003 - present
	for the TTT Mentor Program	•

## Curriculum Vitae

#### Kate A. Corbett

#### Education

Bachelor of Science Degree, CHEMISTRY May 2003 MERRIMACK COLLEGE

Coursework included: Organic Chemistry, Inorganic Chemistry, Quantitative Analysis, Instrumental Analysis, Physical Chemistry, Physics, Calculus

## **Employment**

Chemist II State Laboratory Institute (March 2008-Present)

Massachusetts Department of Public Health

**Drug Analysis Laboratory** 

- Responsible for the identification of substance and trafficking substances to determine violation of the Massachusetts drug laws
- Responsible for the identification of pharmaceuticals to determine violation of the Massachusetts drug laws
- Operate analytical instrumentation, microscopes and balances for forensic drug analysis

Chemist | State Laboratory Institute (2005-March 2008)

Massachusetts Department of Public Health

**Drug Analysis Laboratory** 

- Responsible for the identification of substance to determine violation of the Massachusetts drug laws
- Operate analytical instrumentation for the purpose of performing forensic drug analysis
- Successfully completed an eight week training course in the analysis of drugs conducted by senior staff of the Department of Public Health, Drug Analysis Laboratory
- > Appointed an assistant analyst for the Department of Public Health, Drug Analysis Laboratory in 2005.

Research Associate (September 2003 - August 2005)

SENSOR TECHNOLOGIES, INC - Shrewsbury, MA

- Prepared chemistries used in making sensor beads
- > Generated and examined sensors employing fluorescence spectroscopy
- > Performed protein, dye and sugar assays using UV/VIS spectrophotometry
- > Carried out titrations on ricin using fluorescence correlation spectroscopy
- > Statistical analysis of experimental data

Intern (March 2003 - August 2003)

MASSACHUSETTS STATE POLICE CRIME LABORATORY - Sudbury, MA

- Assisted in the gathering of case files to fulfill the National Institute of Justice's No Suspect Backlog Reduction Grant
- Observed in the Evidence, Criminalistics, DNA, Drug, Trace, Toxicology, and Bomb/Arson Units



CC #	
BOOK# 4	
PAGE #	
DESTRUCTION #	

DRUG RECEIPT	PAGE #				
	DESTRUCTION #				
District/Unit <u>CG DCU</u>	- 4	****			
Name & Rank of Arresting Officer <u>/ )</u> タチー/	2 c. Higan	ID#/058/			
DEFENDANT'S NAME	ADDRESS	CITY	STATE		
		S BOSTON	MA		
		S. Boston			
			SE ONLY		
DESCRIPTION OF ITEMS SUBMITTED	GROSS QUANTITY	GROSS WEIGHT	ANALYSIS NUMBER		
(crack) cocare	10/pb	1,639	-		
o be completed by ECU personnel only	./				
Name and Rank of Submitting Officer	V White	ID#/	1069		
Received by	EW	ID#//	16-10		
PD Form 0038-RtS-0907 (prev. 1753)		ECU Control #	· · · · · · · · · · · · · · · · · · ·		

BOSION POLICE DRUG RECEIPT		СС #				
		DESTRUCTION #				
District/Unit E - 18  Name & Rank of Arresting Officer	SOF.	weeply	ID# <i>819</i>	5		
DEFENDANT'S NAME		ADDRESS	CITY	STATE		
			Muharan	MA		
			LAB USE	ONLY		
DESCRIPTION OF ITEMS SUBMIT	TED	GROSS QUANTITY	GROSS WEIGHT	ANALYSIS NUMBER		
CANCIC		1 kg 1/13	5,859			
To be completed by ECU personnel of	only					
Name and Rank of Submitting Officer	JA,	men of	ID#	70		
Received by	Lll	)	Date/	-10		

ECU Control #

No. Date Analyzed: F City: Boston D.C.U. Police Dept. Officer: P.O. SYBIL WHITE Def: Amount: Subst; SUB No. Cont: Cont: pb Date Rec'd: 11/16/2010 No. Analyzed: Gross Wt.: 1.63 Net Weight: 0.10 # Tests: 6950 Findings:

Date Analyzed: 12-16-LO

City: Boston D.C.U. Police Dept.

Officer: P.O. Diana Lopez

Def:

Amount:

rit.

No. Cont:

Cont: pb

Date Rec'd: 12/01/2010

Gross Wt.:

5.85

No. Analyzed:

Net Weight: 2, 0

Subst: SUB

Findings:

cocaine

# DRUG POWDER ANALYSIS FORM

SAMPLE #	AGENCY_	Boswn	ANA	LYST	B3.
No. of samples tested:			Evidenc	e Wt	
PHYSICAL DESCRIPTION:			Gross Wt	( ):c	).1273
OFF WNIKE C	herry subs	400ce	Gross Wt	( ):	
, ,	c 60		Pk	g. Wt:	COCOPSCIONO COMPANION PROPERTY CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CO
		•	N	et Wt:	0.1084
		,	•		
	•				
PRELIMINARY TESTS Spot Tests			Microcrystall	ine Tests	
Cobalt	•		Gold		
Thiocyanate ( -) +		(	Chloride 4		000000000000000000000000000000000000000
Marquis	1000000p		TLTA $( \rightarrow \rightarrow \rightarrow$	oor	nonconnoconsisted Martinines
Froehde's	g80/00000		OTHER T	<u>ESTS</u>	•
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	00000000000000000000000000000000000000				
PRELIMINARY TEST RESULT	_		C/MS CONFIRM	•	<u>est</u>
RESULTS Cocung		RE	SULTS COC	aro	000000000 <del>0 (0)60-0000000</del>
DATE 12-03-10	<del></del>	OPER	MS RATOR <u>IC</u>	<u>a C</u>	
			DATE 12 -	7-10	

SAMPLE # AGENCY _	Boston ANALYST DUB
HYSICAL DESCRIPTION:	Er mok
Substance	in 1 PB
Marg -	Gross M: 2,1290g
Marg — Froed — Mack —	Name 2.02469
Color/+ -	+ Madd
Gold +	
TZTA J + M	doid
PRELIMINARY TEST RESULTS	GC/MS CONFIRMATORY TEST
RESULTS Cocahe	RESULTS Cocame
DATE /2/14/10	MS Woperator <u>1532</u>

MS

MS

DATE 12/16/10

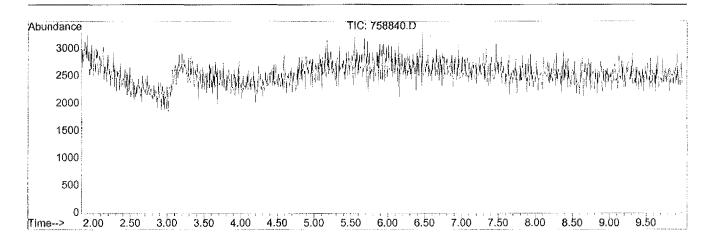
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File Name :  $F:\Q4-2010\SYSTEM6\12_06_10\758840.D$ 

Operator : ASD/KAC

Date Acquired : 6 Dec 2010 22:41

Sample Name : BLANK Submitted by : ASD Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



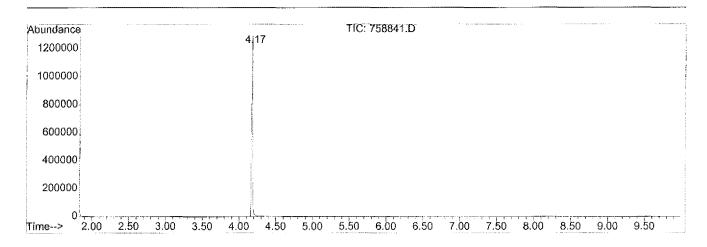
Ret. Time Area Area % Ratio %

Information from Data File:

File Name :  $F:\Q4-2010\SYSTEM6\12\_06\_10\758841.D$  Operator : ASD/KAC

Date Acquired : 6 Dec 2010 22:54

Sample Name : COCAINE STD Submitted by : ASD : 41 Vial Number AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time	Area	Area %	Ratio %
4.173	1393183	100.00	100.00

File Name : F:\Q4-2010\SYSTEM6\12 06 10\758841.D

Operator : ASD/KAC

Date Acquired : 6 Dec 2010 22:54

Sample Name : COCAINE STD

Submitted by : ASD
Vial Number : 41
AcquisitionMeth: DRUGS
Integrator : RTE

1

Search Libraries: C:\DATABASE\SLI.L

Minimum Quality: 90

C:\DATABASE\PMW\_TOX2.L

Minimum Quality: 90

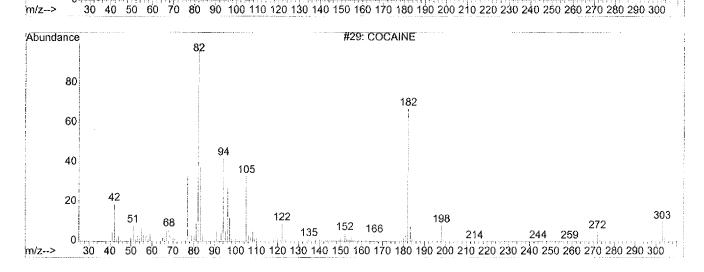
C:\DATABASE\NIST98.L

PK# RT Library/ID CAS# Qual

4.17 C:\DATABASE\SLI.L COCAINE

000050-36-2 99

Average of 4.150 to 4.268 min.: 758841.D (-) Abundance 82 182 80 60 40 105 42 20 303 122 198 68 <sup>152</sup> 166 135 214



758841.D

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Page 2

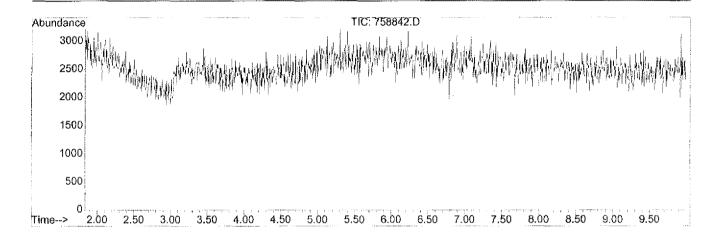
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Operator : ASD/KAC

Date Acquired : 6 Dec 2010 23:07

Sample Name : BLANK Submitted by : ASD Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

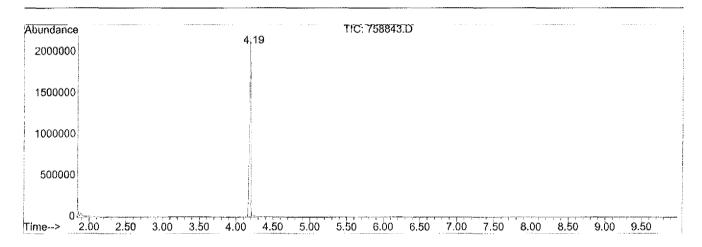
File Name : F:\Q4-2010\SYSTEM6\12 06\_10\758843.D

Operator : ASD/KAC

Date Acquired : 6 Dec 2010 23:21

Sample Name :

Submitted by : ASD
Vial Number : 43
AcquisitionMeth: DRUGS
Integrator : RTE



Ret. Time	Area	Area %	Ratio %	
4.185	2802730	100.00	100.00	

File Name : F:\Q4-2010\SYSTEM6\12 06 10\758843.D

Operator : ASD/KAC

Date Acquired : 6 Dec 2010 23:21

Sample Name

Submitted by : ASD
Vial Number : 43
AcquisitionMeth: DRUGS
Integrator : RTE

Search Libraries: C:\DATABASE\SLI.L

Minimum Quality: 90

C:\DATABASE\PMW\_TOX2.L

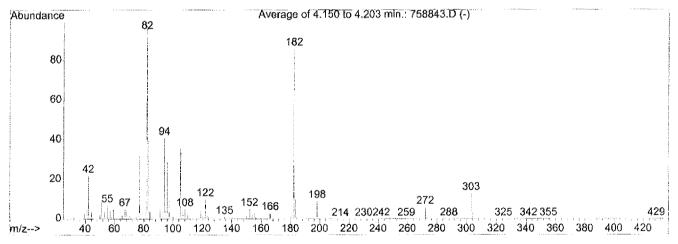
Minimum Quality: 90

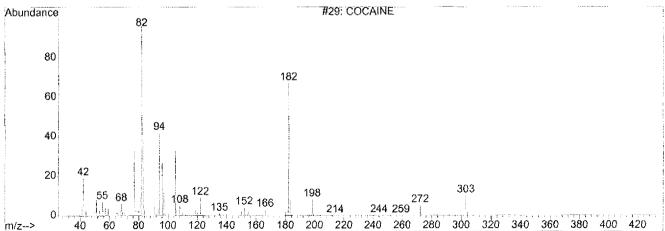
C:\DATABASE\NIST98.L

PK# RT Library/ID CAS# Qual

1 4.19 C:\DATABASE\SLI.L COCAINE

000050-36-2 99





758843.D

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Page 2

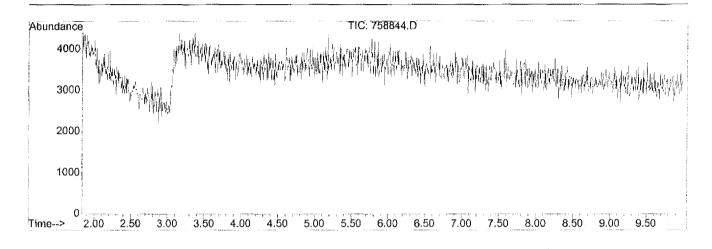
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Operator : ASD/KAC

Date Acquired : 6 Dec 2010 23:34

Sample Name : BLANK Submitted by : ASD Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

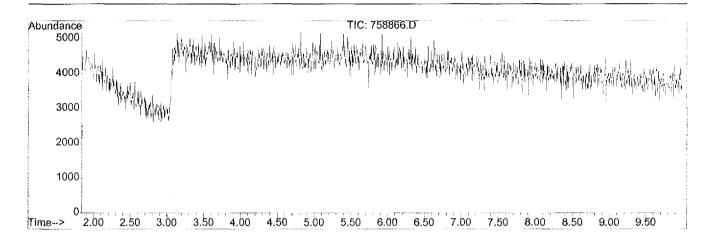
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File Name :  $F:\Q4-2010\SYSTEM6\12\ 06\ 10\758866.D$ 

Operator : ASD/KAC

Date Acquired : 7 Dec 2010 4:24

Sample Name : BLANK Submitted by : ASD Vial Number : 2 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

Information from Data File:

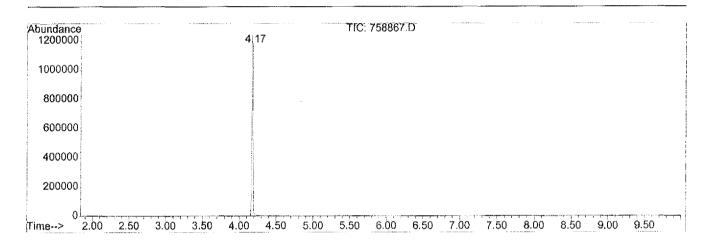
File Name :  $F:\Q4-2010\SYSTEM6\12\ 06\ 10\758867.D$ 

Operator : ASD/KAC

Date Acquired: 7 Dec 2010 4:37

Sample Name : COCAINE STD

Submitted by : ASD Vial Number : 41 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time	Area	Area %	Ratio %
4.173	1294086	100.00	100.00

File Name : F:\Q4-2010\SYSTEM6\12 06 10\758867.D

Operator : ASD/KAC

Date Acquired : 7 Dec 2010 4:37

Sample Name : COCAINE STD

Submitted by : ASD Vial Number : 41 AcquisitionMeth: DRUGS Integrator : RTE

Search Libraries: C:\DATABASE\SLI.L

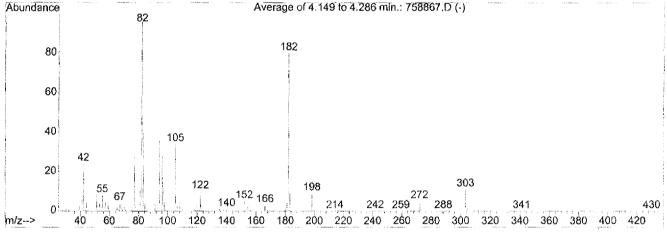
Minimum Quality: 90

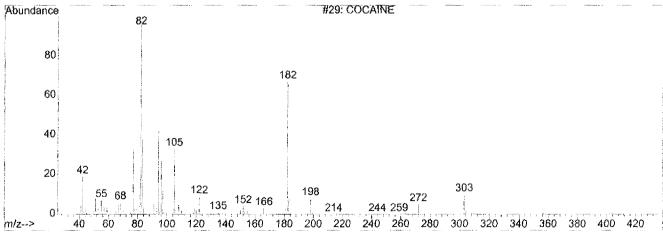
C:\DATABASE\PMW\_TOX2.L

Minimum Quality: 90

C:\DATABASE\NIST98.L

PK#	RT	Library/ID	CAS#	Qual
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758867.D

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Page 2

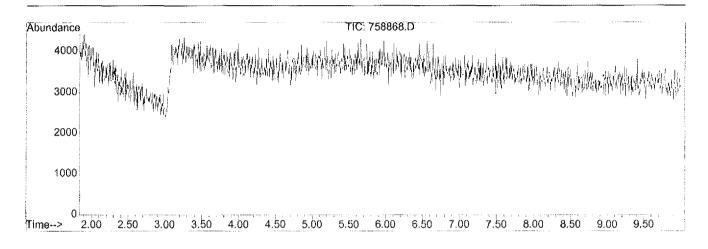
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File Name : F:\Q4-2010\SYSTEM6\12 06 10\758868.D

Operator : ASD/KAC

Date Acquired : 7 Dec 2010 4:50

Sample Name : BLANK
Submitted by : ASD
Vial Number : 2
AcquisitionMeth: DRUGS
Integrator : RTE



Ret. Time Area Area % Ratio %

\*\*\*NO INTEGRATED PEAKS\*\*\*

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Page 1

Information from Data File:

File Name : F:\Q4-2010\SYSTEM6\12\_15\_10\761014.D

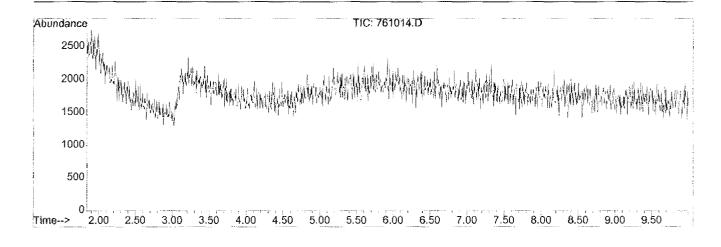
Operator : ASD

Date Acquired : 15 Dec 2010 14:49

Sample Name : BLANK

Submitted by

Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

Information from Data File:

File Name :  $F:\Q4-2010\SYSTEM6\12\ 15\ 10\761015.D$ 

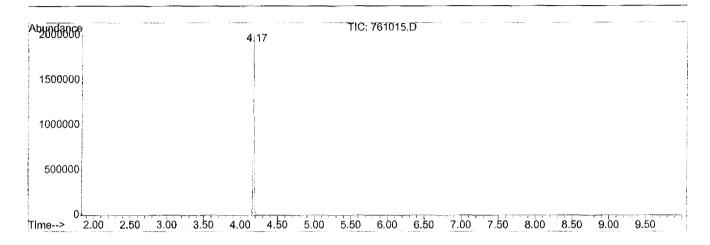
Operator : ASD

Date Acquired : 15 Dec 2010 15:03

Sample Name : COCAINE STD

Submitted by

Vial Number : 15 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time	Area	Area %	Ratio %
4.173	1955780	100.00	100.00

761015.D

File Name :  $F:\Q4-2010\SYSTEM6\12\ 15\ 10\761015.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 15:03

Sample Name : COCAINE STD

Submitted by :

Vial Number : 15 AcquisitionMeth: DRUGS Integrator : RTE

Search Libraries: C:\DATABASE\SLI.L

Minimum Quality: 90 Minimum Quality: 90

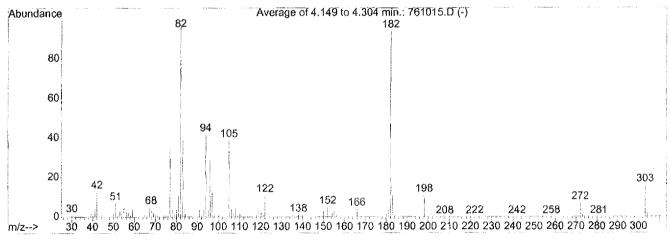
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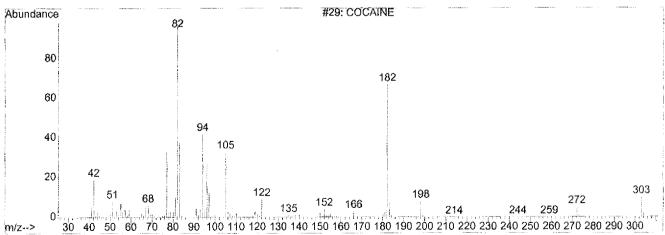
C:\DATABASE\NIST98.L

PK# RT Library/ID CAS# Qual

1 4.17 C:\DATABASE\SLI.L COCAINE

000050-36-2 99





761015.D

Thu Jun 23 14:17:05 2011

Page 2

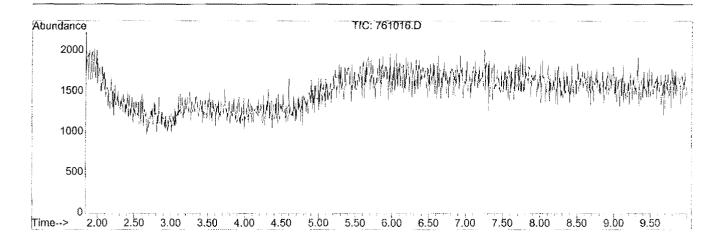
Information from Data File:

File Name : F:\Q4-2010\SYSTEM6\12\_15\_10\761016.D

Operator : ASD

Date Acquired : 15 Dec 2010 15:16

Sample Name : BLANK Submitted by : DXF Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

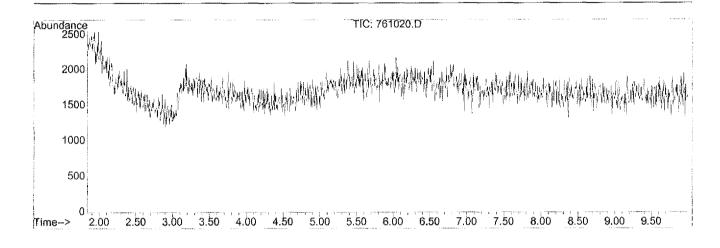
Information from Data File:

File Name :  $F:\Q4-2010\SYSTEM6\12\15\10\761020.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 16:08

Sample Name : BLANK Submitted by : DXF Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

Information from Data File:

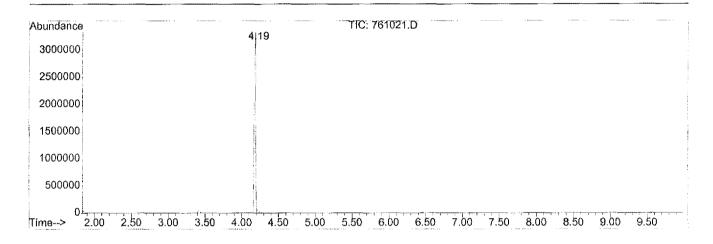
File Name :  $F:\Q4-2010\SYSTEM6\12\15\10\761021.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 16:22

Sample Name :

Submitted by : DXF
Vial Number : 21
AcquisitionMeth: DRUGS
Integrator : RTE



Ret. Time	Area	Area %	Ratio %
4.185	4363802	100.00	100.00

File Name :  $F:\Q4-2010\SYSTEM6\12\15\10\761021.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 16:22

Sample Name :

Submitted by : DXF Vial Number : 21 AcquisitionMeth: DRUGS Integrator : RTE

Search Libraries: C:\DATABASE\SLI.L

ABASE\SLI.L Minimum Quality: 90

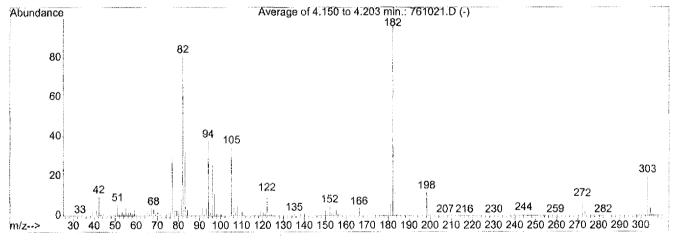
C:\DATABASE\PMW TOX2.L Minimum Quality: 90

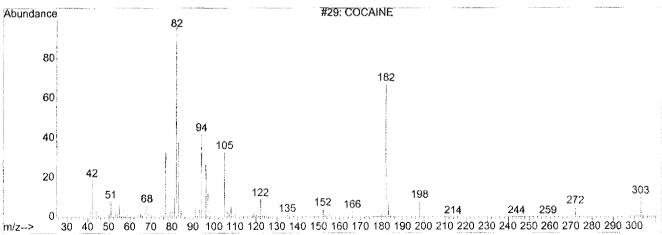
C:\DATABASE\NIST98.L

PK# RT Library/ID CAS# Qual

1 4.19 C:\DATABASE\SLI.L

COCAINE 000050-36-2 99





761021.D

Thu Jun 23 14:17:16 2011

Page 2

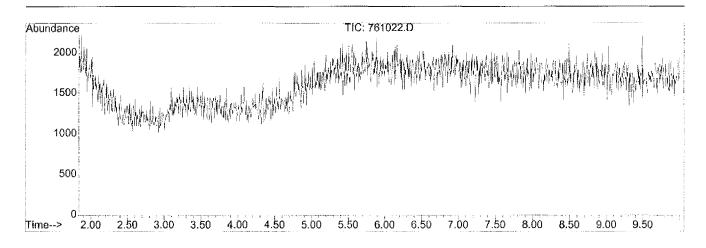
Information from Data File:

File Name :  $F:\Q4-2010\SYSTEM6\12_15_10\761022.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 16:35

Sample Name : BLANK Submitted by : DXF Vial Number : 1 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %

<sup>\*\*\*</sup>NO INTEGRATED PEAKS\*\*\*

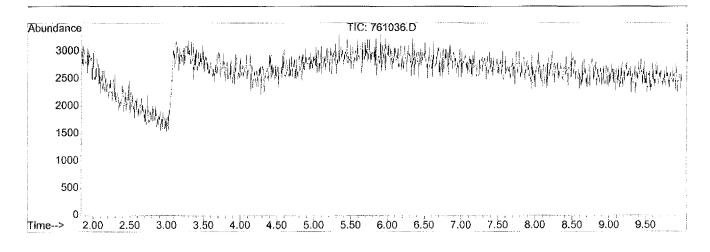
Information from Data File:

File Name : F:\Q4-2010\SYSTEM6\12\_15\_10\761036.D

Operator : ASD

Date Acquired : 15 Dec 2010 19:38

Sample Name : BLANK
Submitted by : DXF
Vial Number : 2
AcquisitionMeth: DRUGS
Integrator : RTE



Ret. Time Area Area % Ratio %

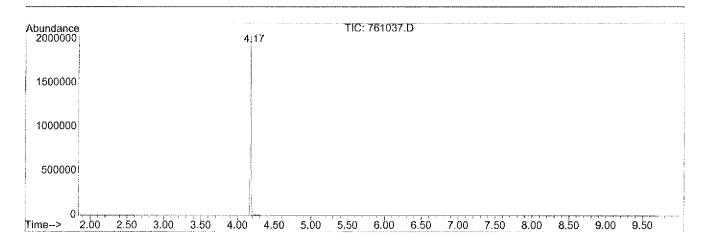
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Operator : ASD

Date Acquired : 15 Dec 2010 19:51

Sample Name : COCAINE STD

Submitted by : DXF Vial Number : 15 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time	Area	Area %	Ratio %
4.173	1959635	100.00	100.00

File Name : F:\Q4-2010\SYSTEM6\12\_15\_10\761037.D

Operator : ASD

Date Acquired 15 Dec 2010 19:51

Sample Name : COCAINE STD

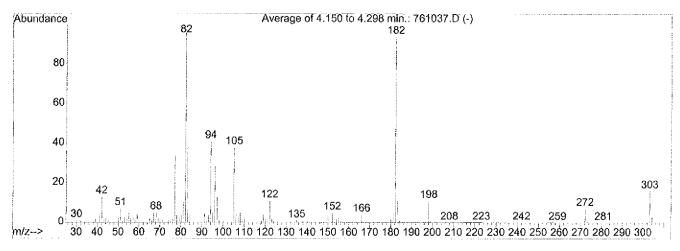
Submitted by : DXF Vial Number 15 AcquisitionMeth: DRUGS : RTE Integrator

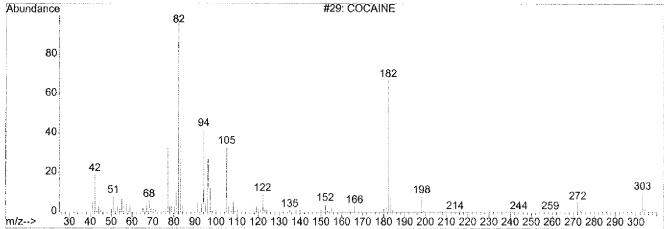
Search Libraries: C:\DATABASE\SLI.L

Minimum Quality: 90 C:\DATABASE\PMW TOX2.L Minimum Quality: 90

C:\DATABASE\NIST98.L

PK#	RT	Library/ID	CAS#	Qual
1	4.17	C:\DATABASE\SLI.L COCAINE	000050-36-2	99





761037.D

Thu Jun 23 14:17:30 2011

Paqe 2

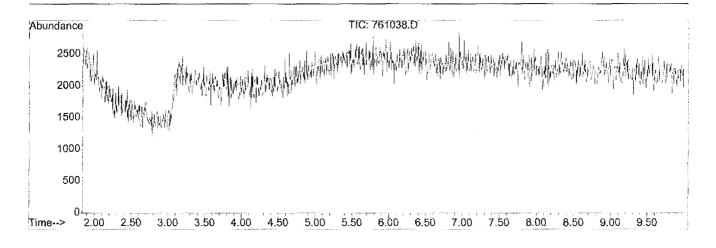
Information from Data File:

File Name :  $F:\Q4-2010\SYSTEM6\12\ 15\ 10\761038.D$ 

Operator : ASD

Date Acquired : 15 Dec 2010 20:04

Sample Name : BLANK Submitted by : DXF Vial Number : 2 AcquisitionMeth: DRUGS Integrator : RTE



Ret. Time Area Area % Ratio %